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MEK1 Antibody (Center S217/221)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18703c

Product Information

Application	IHC-P-Leica, WB, E
Primary Accession	Q02750
Other Accession	P36506, Q63932, P36507, Q90891, Q05116, Q01986, P29678, P31938, Q63980, Q10664, Q24324, NP_002746.1
Reactivity	Human, Rat, Mouse
Predicted	Drosophila, C.Elegans, Hamster, Rabbit, Rat, Xenopus, Chicken, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB39686
Calculated MW	43439
Antigen Region	200-227

Additional Information

Gene ID	5604
Other Names	Dual specificity mitogen-activated protein kinase kinase 1, MAP kinase kinase 1, MAPKK 1, MKK1, ERK activator kinase 1, MAPK/ERK kinase 1, MEK 1, MAP2K1, MEK1, PRKMK1
Target/Specificity	This MEK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 200-227 amino acids from the Central region of human MEK1.
Dilution	IHC-P-Leica~~1:100 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MEK1 Antibody (Center S217/221) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP2K1 (HGNC:6840)

Synonyms	MEK1, PRKMK1
Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Activates BRAF in a KSR1 or KSR2-dependent manner; by binding to KSR1 or KSR2 releases the inhibitory intramolecular interaction between KSR1 or KSR2 protein kinase and N-terminal domains which promotes KSR1 or KSR2-BRAF dimerization and BRAF activation (PubMed:29433126). Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis.
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus Membrane; Peripheral membrane protein. Note=Localizes at centrosomes during prometaphase, midzone during anaphase and midbody during telophase/cytokinesis (PubMed:14737111). Membrane localization is probably regulated by its interaction with KSR1 (PubMed:10409742)
Tissue Location	Widely expressed, with extremely low levels in brain.

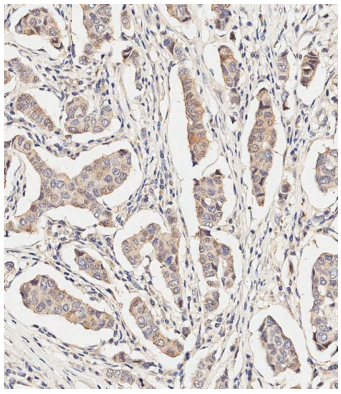
Background

The protein encoded by this gene is a member of the dual specificity protein kinase family, which acts as a mitogen-activated protein (MAP) kinase kinase. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals. This protein kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development.

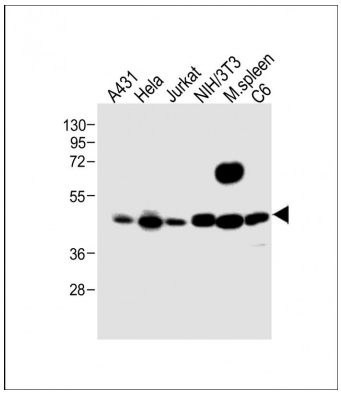
References

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Yokoyama, T., et al. Blood 116(15):2768-2775(2010)
Klemke, M., et al. EMBO J. 29(17):2915-2929(2010)
Shang, C., et al. Med. Sci. Monit. 16 (6), BR168-BR173 (2010) :
Sasaki, H., et al. J Thorac Oncol 5(5):597-600(2010)

Images



Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue using AP18703c performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



All lanes : Anti-Bi- MEK1 Antibody at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: Hela whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: NIH/3T3 whole cell lysate Lane 5: Mouse spleen lysate Lane 6: C6 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 41 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.